UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/463,557	08/15/2000	Nir Bar Natan	35265/1:1	6477

3528	7590	09/06/2005

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EXAMINER
BALI, VIKKRAM

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.
09/463,557</td><td>Applicant(s)
NATAN ET AL.</td></tr>
<tr><td>Examiner
Vikkram Bali</td><td>Art Unit
2623</td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>02 July 2004</u>.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>*1-7,9-11,13,14,16,17 and 19-22*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>*1-7,9-11,13,14,16,17 and 19-22*</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/2/2004</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 7-05)   Office Action Summary   Part of Paper No./Mail Date 20050831

DETAILED ACTION

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/2/2004 has been entered.

2.   All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-6, 9-11, 16, 17, and 19-22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Beatson et al. (5,892,824) in view of Marshall (5,774,571).

Regarding claim 1, Beatson et al. ("Beatson") discloses a digitizer having a

digitizer surface 114 and an associated pen 74 having a pen tip (Figure 2), a dynamic

identification unit 200 for receiving data from the digitizer produced during signing a

signature with the pen on the digitizer (Figure 5), calculating signature parameters and

permitted variations from the data (Col. 19, lines 23-26), and generating a reference

signature record therefrom (Col. 18, lines 7-58). Beatson further discloses a

comparator for comparing the received parameters produced during signature with the

reference signature record (Col. 19, lines 26-33), and an apparatus for providing an

accept/reject response in accordance with the output of the comparator (Col. 19, lines

33-38). Beatson discloses the reference signature record as a dynamic personal

signature profile that is updated in accordance with received parameters produced

during each accepted signature (Col. 19, lines 39-48). Beatson does not appear to

recognize including signature parameters being received as a function of time, being

dimensionally independent and including a parameter based on a pen position,

pressure applied to the pen tip, pen tilt, and a change of relative angle. However,

Marshall teaches that it is known to include signature parameters being received as a

function of time (Col. 10, lines 32-35), being dimensionally independent and including a

parameter based on a pen position expressed in x and y coordinates (Col. 3, lines 32-

43), a parameter based on a pressure applied to the pen tip (Col. 7, lines 1-9), a pen tilt

parameter measuring a pen angle with the digitizer surface (Col. 8, lines 37-60), and a

change of relative angle parameter measuring an orientation of the pen on the digitizer

surface (Col. 7, lines 28-36; Col. 9, lines 13-34). Therefore, it would have been obvious

to one of ordinary skill in the art at the time of the invention to have modified the

signature parameters disclosed by Beatson to include the parameters taught by

Marshall because they are well known in the art and provide an accurate verification of

the person writing the signature. Note, the change of relative angle parameter as

claimed could also be considered the slope of the handwritten curve.

Regarding claim 2, Beatson discloses a transmitter for transmitting the calculated

signature parameters for authentication and a receiver for receiving the transmitted

signature parameters with the receiver being coupled to the comparator (Col. 9, lines

29-45).

Regarding claim 3, Beatson discloses including an encryptor for encrypting the

measured parameters to provide an encrypted signature record (Col. 14, lines 65-67)

and the dynamic identification unit including a decoder for decoding the encrypted

signature record (Col. 15, lines 21-31).

Regarding claim 4, Beatson discloses the reference signature stored on an IC

card (Col. 18, lines 7-18).

Regarding claim 5, Beatson discloses authenticating a signature transmitted over

a transmission line as shown in Figure 1 (Col. 9, lines 29-33). Beatson discloses a

vendor unit 64 including a digitizer (Col. 12, lines 35-54) and an associated pen 74

(Figure 2). Beatson further discloses a signature authorization unit 68 coupled to the

vendor unit by the transmission line (Figure 1). Beatson discloses a dynamic

identification unit 200 for receiving data from the digitizer produced during signing a

signature with the pen on the digitizer (Figure 5), calculating signature parameters and

permitted variations from the data (Col. 19, lines 23-26), and generating a reference

signature record therefrom (Col. 18, lines 7-58). Beatson further discloses a

comparator for comparing the received parameters produced during signature with the

reference signature record (Col. 19, lines 26-33), and an apparatus for providing an

accept/reject response to the vendor unit in accordance with the output of the

comparator (Col. 19, lines 33-38).

Regarding claim 6, Beatson discloses a cardholder unit 64 including a digitizer

(Col. 12, lines 35-54) and an associated pen 74 and an apparatus for transmitting the

output of the digitizer over the communication transmission lines (Figure 1). Beatson

further discloses a signature authorization unit 68 for receiving data from the digitizer

produced during signature by the pen on the digitizer, calculating signature parameters

therefrom (Col. 19, lines 23-26), and generating a reference signature record

corresponding thereto (Col. 18, lines 7-58). Beatson discloses a comparator for

comparing the parameters produced during signature with the reference signature

record (Col. 19, lines 26-33) and an apparatus for providing an accept/reject response

according to the output of the comparator (Col. 19, lines 33-38). Beatson further

discloses a vendor unit 52 coupled to the cardholder unit and to the signature

authorization unit by the communication transmission lines and including a transceiver

for receiving the output of the digitizer from the cardholder unit and transmitting it to the

signature authorization unit, and for receiving the accept/reject response from the

signature authorization unit (Col. 9, lines 29-45).

Regarding claim 9, Beatson discloses a method of authenticating a signature

including providing a reference signature record (Col. 9, lines 1-10), signing with a pen

74 on a digitizer tablet 64, calculating signature parameters from data received from the

digitizer produced from signing the signature with the pen on the digitizer (Col. 19, lines

23-26), comparing the signature parameters produced from signing the signature with

the reference signature record (Col. 19, lines 26-33), and providing an accept/reject

response in accordance with results of the comparison (Col. 19, lines 33-38). Beatson

further discloses the reference signature record as a dynamic personal signature profile

that is updated in accordance with the signature parameters produced during each

accepted signature (Col. 19, lines 39-48). The arguments analogous to those

presented above for claim 1 are applicable to claim 9.

Regarding claim 10, Beatson discloses encrypting the calculated parameters with an encryption key after the step of calculating (Col. 14, lines 65-67) and decrypting the encrypted parameters before comparing the parameters (Col. 15, lines 21-27).

Regarding claim 11, Beatson discloses providing a reference signature reference including writing the signature on the digitizer several times and calculating signature parameters for each signature (Col.18, lines 16-33), calculating permitted variation of the signature parameters (Col. 18, lines 51-52), and storing the signature parameters and permitted variation as a reference signature record (Col. 18, lines 53-58).

Regarding claim 17, Beatson discloses providing an accept/reject response including granting or denying access to network resources (Col. 8, lines 16-39).

Regarding claim 20, Beatson discloses comparing signature parameters on parameters received from the digitizer tablet at any orientation and size of signature relative to the tablet (Col. 16, lines 5-30).

Regarding claim 21, Beatson discloses calculating signature parameters on parameters received from the digitizer tablet at any orientation and size of signature relative to the tablet (Col. 16, lines 5-30).

Regarding claim 22, Beatson discloses providing an accept/reject response including granting or denying access to network resources (Col. 8, lines 16-39).

Regarding claims 16 and 19, Beatson discloses providing a reject response when a signature is incompatible with the immediately previous signature (Col. 18, lines 34-39). Beatson does not appear to specify when a signature is identical to an immediately previous signature. However, this would have been obvious in light of

Beatson's disclosure to specify rejecting a signature that is identical to an immediately previous signature in order to obtain a plurality of variations to formulate a reference signature record.

4.   Claims 7, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beatson et al. (5,892,824) and Marshall (5,774,571) as applied to claim 1 above, and further in view of Fan et al. (5,111,512).

Regarding claim 7, Beatson discloses the reference signature recode including signature parameters and permitted variations. Beatson and Marshall do not seem expressly state storing the parameters and variations as an array. However, Fan et al. ("Fan") teaches that it is known to store signature parameters an array (Col. 2, lines 11-15). Therefore, it would have been obvious to one of ordinary skill in the art to have modified the signature parameters and permitted variations disclosed by Beatson and Marshall to include an array, as taught by Fan, because it is routinely implemented in the art in order to store the discrete values.

Regarding claim 13, Beatson discloses the personal signature profile including parameters and personal tolerances based on received parameters produced during a plurality of accepted signatures (Col. 19, lines 39-48 and Col. 20, lines 1-14). The arguments analogous to those presented above for claim 7 are applicable to claim 13.

Regarding claim 14, Beatson discloses the personal tolerances are determined individually for each person according to the variations in the received parameters produced during each accepted signature of that person (Col. 19, lines 39-48 and Col. 20, lines 1-14).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 571.272.7415. The examiner can normally be reached on 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571.272.7414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vikkram Bali
Primary Examiner
Art Unit 2623

vb
August 31, 2005